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Coal Policy Committee
Email: energy.coalpolicy@gov.ab.ca

Re: A Brief History of Regulatory Failure in Alberta (or Why Albertans Do Not Trust their Regulators)

I. INTRODUCTION AND SUMMARY

I am pleased to make this submission to the Coal Policy Committee to assist in its development of a modern coal policy for Alberta. Briefly by way of background, I am an associate professor at the University of Calgary Faculty of Law (since 2013). I hold bachelor's degrees in science and law from the University of Saskatchewan, a Master of Laws from the University of California at Berkeley and am currently completing a PhD in resource management at the University of British Columbia's Institute for Resources, Environment and Sustainability. Prior to joining the University of Calgary, I was a regulatory lawyer with Fisheries and Oceans Canada. My full profile and list of selected publications can be found here: <https://law.ucalgary.ca/profiles/olszynski>

My colleagues at the Faculty of Law have made submissions with respect to specific elements of a modern coal policy for Alberta. Following media reports regarding the results of an initial provincial survey that showed that "more than 85 per cent of [Albertans] who responded...were not at all confident that Alberta's regulation of coal mining was safe, efficient, orderly or environmentally responsible,"¹ I have decided to focus my presentation on the question of **regulatory trust**. That this question falls within the Committee's mandate was confirmed by member Ron Wallace during his subsequent appearance on a CBC Radio phone-in show:

In response to one caller who said coal mines "aren't worth the risk," [Ron] Wallace said Albertans have to be able to trust those charged with protecting the land and water. He said it was "very troubling" that trust seems to be in short supply.

"We are going to look very, very closely at understanding how that dynamic has happened."²

As further set out below, a close examination of the past fifteen years of environmental regulation in Alberta reveals **an overwhelming pattern of regulatory failure**. This examination includes over half a dozen independent expert reports, each of which has noted serious deficiencies in regulatory practice and design: inadequate environmental impact assessment (EIS) processes; deficiencies in assessing and managing cumulative effects; insufficient monitoring and enforcement; and inadequate bonding for reclamation and restoration. By and large, these deficiencies have been ignored or, as in the exceptional case of monitoring, addressed temporarily only.

¹ See <https://www.cbc.ca/news/canada/edmonton/coal-survey-results-economic-environment-1.6030796>

² See <https://www.cbc.ca/news/canada/edmonton/head-of-coal-mining-panel-says-albertans-trust-in-resource-regulators-to-be-examined-1.6047913>

With a view towards gauging public perception, I have also included links to, and excerpts from, news reports written at the time that these various reports were released, as well as other notable media reports with respect to Alberta's regulatory performance. As will be seen, **Albertans are wholly justified in their skepticism of their regulators, who consistently exhibit the characteristics of captured regulators, whether by industry, politicians or both.**

My submission concludes with three basic recommendations. The first is to acknowledge the scope and the severity of the problem. Contrary to common political and industry talking points, Alberta's regulators have largely failed to protect the public interest. Second, in order to rebuild trust, Alberta's regulators need to become much more transparent in all aspects of regulation, including policy development. Third and finally, our regulators need to be less subject to the whims and wants of politicians and industry; they need to be more independent.

II. INDEPENDENT EXPERT REPORTS

The following reports all set out serious deficiencies in regulatory practice and design. I note at the outset that while some of them include coal mining and development (e.g. the Auditor General's reviews of the Mine Financial Security Program 2015 and 2021), some focus on oil and gas development. These are nevertheless relevant because (i) both coal and oil and gas involve the same primary regulators (currently the Alberta Energy Regulator (AER) and Alberta Environment and Parks (AEP)) and (ii) Albertans' primary exposure to these regulators is in the oil and gas context. Simply put, to understand Albertans' distrust of their regulators, it is necessary to consider those regulators' track records in whichever context Albertans are most familiar with. Moreover, there is no reason to assume that the same regulators' performance would differ between these two contexts (coal versus oil and gas); indeed, the abrupt demise of the 1976 Coal Policy and related regulatory developments suggest similar, if not identical, patterns and approaches.³

Report	Excerpts
1. "Investing in our Future: Responding to the Rapid Growth of Oil Sands Development: Final Report" December 29, 2006 (Radke Report)	Departments lack capacity to complete Environmental Impact Assessments (EIAs), to complete technical studies such as those involving instream flows, to focus on cumulative effects and to develop policy in a timely fashion. In addition, capacity to monitor and enforce environmental requirements is inadequate" (at p. 133).
2. The Royal Society of Canada, "Environmental and Health Impacts of Canada's Oil Sands Industry" (2010)	The environmental regulatory capacity of the Alberta and Canadian Governments does not appear to have kept pace with the rapid growth of the oil sands industry over the past decade. The EIA process relied upon by decision-makers to determine whether proposed oil sands projects are in the public interest has serious deficiencies in relation to international best practice. Environmental data access for cumulative impact assessment needs to improve" (Executive Summary)

³ See e.g. Robson Fletcher, "Answers to questions about Alberta's coal policy that, at this point, you're too afraid to ask" (21 January 2021): <https://www.cbc.ca/news/canada/calgary/alberta-coal-policy-faq-frequently-asked-questions-1.5880659>

<p>3. <u>"A World Class Environmental Monitoring, Evaluation and Reporting System for Alberta: The Report of the Alberta Environmental Monitoring Panel"</u> (June 2011)</p>	<p>While not all monitoring organizations and activities are deficient in the same areas, shortcomings generally focus on the following themes:</p> <ul style="list-style-type: none"> • Monitoring programs are not properly designed. Monitoring requirements have evolved over time and program design has, in many cases, not kept pace. • Monitoring organizations suffer from inadequate funding, weak scientific direction, and a general lack of resources to take on the enormous challenge of monitoring. • Monitoring results are not communicated or made available in transparent, useful formats. • Multiple independent organizations managed by stakeholder boards are not well organized to achieve either holistic scientific objectives or operational excellence. <p>Consequently, the overall "state of the environment" is not well understood. Of particular concern is a lack of scientific oversight of monitoring, evaluation and reporting activities, resulting in an inability to:</p> <ul style="list-style-type: none"> • Identify critical knowledge gaps that prevent meaningful long-term monitoring and effective adaptive management; • Provide sufficient feedback to develop standard environmental monitoring methods, which are presently lacking, particularly in the Lower Athabasca region; and • Establish meaningful environmental baselines and reference conditions essential for cumulative effects monitoring; most reference stations in the oil sands area have been lost as development expanded." <p>(at p. 25)</p>
<p>4. Report of the Auditor General of Alberta (July 2015), <u>Environment and Parks and the Alberta Energy Regulatory – Systems to Ensure Sufficient Financial Security for Land Disturbances from Mining</u></p> <p>*The MFSP applies to both oil sands and coal mines</p>	<p>Since the time of our last follow-up audit, the Department of Environment and Parks developed and implemented the Mine Financial Security Program (MFSP). The focus of our current audit was on this program, and whether it constitutes an approach that provides for sufficient financial security...</p> <p>As of December 31, 2014, \$1.57 billion of security is currently being held in comparison to estimated reclamation liabilities of \$20.8 billion...</p> <p>Overall conclusion Implementing the MFSP was an important step towards a system that obtains sufficient financial</p>

	<p>security for mining related land disturbances. However, for the design and operation of the MFSP to fully reflect the intended objectives of the program, <i>improvements are needed to both how security is calculated and how security amounts are monitored.</i></p> <p>What we found</p> <p>There is a significant risk that asset values calculated by the department are overstated within the MFSP asset calculation, which could result in security amounts inconsistent with the MFSP objectives. The MFSP asset calculations do not incorporate a discount factor to reflect risk, use a forward price factor that underestimates the impact of future price declines, and treat proven and probable reserves as equally valuable.</p> <p>Why this is important to Albertans</p> <p>In the event that a mine operator cannot fulfill its reclamation obligations, and no other private operator assumes the liability, <i>the province may have to pay a potentially substantial cost for this work to be completed.</i> Thus, a robust and responsive system to calculate and collect security from mine operators is essential.</p>
5. Alberta Tailings Ponds II Factual Record (3 September 2020), Commission for Environmental Cooperation, (CEC), established under <i>NAFTA</i> and continued under the <i>USMCA</i>	<p>The Canadian Association of Petroleum Producers (CAPP) submitted groundwater monitoring reports to the Secretariat from two oil sands facilities operated by Syncrude and Suncor. A review of the data presented in the Syncrude monitoring reports by the Secretariat's expert shows consistent evidence of seepage of OSPW from tailings ponds into groundwater at certain monitoring wells that are close in proximity to surface water, including tributaries to the Athabasca River.</p>
<p>6. Report of the Auditor General of Alberta (June 2021), Alberta Environment and Parks—Systems to Ensure Sufficient Financial Security for Land Disturbances from Mining Progress Report</p> <p>*The MFSP applies to both oil sands and coal mines</p>	<p>Given the importance of our findings and that it has been six years since we made the recommendation, we decided to assess what steps management has taken to date and what remains to be completed. We based our follow-up work on the department's May 2017 implementation plan and the March 2019 MFSP Steering Committee Terms of Reference, which outlined further steps and deliverables related to implementing our recommendation.</p> <p>We concluded that the department has not made satisfactory progress in implementing our recommendation. Although the department has completed three phases of analysis over the past six years, management has not made a final decision on</p>

	whether changes to the calculation of security are needed.”
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With few exceptions, the deficiencies and failures identified in these reports were never addressed. The one notable exception is oil sands monitoring; some improvements were made initially, including the funding of the Joint Oil Sands Monitoring Program (JOSMP, now the Oil Sands Monitoring Program) and the creation of the arm’s length Alberta Environmental Monitoring, Evaluation and Reporting Agency (AEMERA). However, AEMERA was wound down several years ago and recent media reports suggest that monitoring capacity within the government of Alberta is again in disarray.⁴

III. MEDIA REPORTS

The following news stories were gathered by searching the internet, including the University of Calgary online library, for media reports mentioning the above-noted reports. This is not a comprehensive cataloguing but does support the basic point that regular Albertans with access to mainstream news over the past decade could be expected to be aware of the province’s dismal regulatory performance, including apparent conflicts of interest between regulators and industry.

“Investing in our Future: Responding to the Rapid Growth of Oil Sands Development: Final Report” December 29, 2006 (Radke Report)	
“Alberta pumping \$400M into oilsands region” (26 February 2007), online: CTVNews.ca https://www.ctvnews.ca/alberta-pumping-400m-into-oilsands-region-1.230904 .	“Many of the report's recommendations urge the government to give more consideration to the impacts of oilsands growth.”
“Suncor executive’s appointment under fire” (13 August 2007), online: CBC.ca https://www.cbc.ca/news/canada/edmonton/suncor-executive-s-appointment-under-fire-1.680375 .	“The appointment of Heather Kennedy to the position of assistant deputy minister for the oilsands sustainable development secretariat is not only unusual, it's completely unacceptable, Brian Mason said. Kennedy is Suncor's vice-president of employee and community relations.” *article notes that the secretariat is responsible for reviewing and completing a cost analysis of the recommendations in the Radke Report
2. The Royal Society of Canada, “Environmental and Health Impacts of Canada’s Oil Sands Industry” (2010)	
“Alberta-Ottawa revamp oilsands monitoring as world watches” (2	“The Royal Society of Canada, an independent body of some of Canada’s top scientists, says

⁴ See Terry Reith, “[Scientists sound alarm over Alberta's new approach to tracking oilsands pollution](#)” CBC News, September 18, 2019.

<p>October 2011), online: CTVNews.ca https://www.ctvnews.ca/alberta-ottawa-revamp-oilsands-monitoring-as-world-watches-1.705668.</p>	<p>the result is monitoring that is entirely outstripped by the scope and scale of the development it's supposed to watchdog."</p>
<p>"Alta.'s McQueen pushes for oil sands monitoring funds" (6 November 2011), online: CTVNews.ca https://www.ctvnews.ca/alta-s-mcqueen-pushes-for-oil-sands-monitoring-funds-1.722001.</p>	<p>"But Diana McQueen said there's broad agreement among her cabinet colleagues and the Tory caucus that Alberta has to do a better environmental job to answer oilsands critics both at home and abroad -- and if that means more cash, so be it."</p> <p>"Alberta Environment has never recovered from a 30 per cent cut in 2008. Its funds also dipped slightly in both of the last two budgets."</p> <p>"Money for monitoring and enforcement has actually shrunk nearly 13 per cent since 2003, despite growth in both industry and international concern over it."</p>
<p>"Athabasca pollution near oilsands is increasing: study" (6 May 2011), online: CTVNews.ca https://www.ctvnews.ca/athabasca-pollution-near-oilsands-is-increasing-study-1.640325.</p>	<p>"A study published in a scientific journal says the Athabasca River that flows through Alberta's oilsands region has become increasingly contaminated over the last decade."</p> <p>"Timoney said his findings question recent conclusions from the Royal Society of Canada that there is "no credible evidence" that contamination from the oilsands is increasing human cancer risks. He said the society relied too heavily on the Alberta government's monitoring program, which has been criticized by several studies -- including the society's."</p>
<p>Weber, Bob, "Alberta, Ottawa to release plan for oilsands environmental monitoring: Alta, feds to detail oilsands monitoring" (3 February 2012), online: <i>The Canadian Press</i> < https://ezproxy.lib.ucalgary.ca/login?url=https://www-proquest-com.ezproxy.lib.ucalgary.ca/wire-feeds/alberta-ottawa-release-plan-oilsands/docview/919967183/se-2?accountid=9838></p>	<p>"Alberta Environment Minister Diana McQueen and her federal counterpart, Peter Kent, have scheduled a joint news conference for early afternoon..."</p> <p>"The plan is considered crucial to answering critics who charge that the multibillion-dollar industry is being allowed to charge ahead far in advance of government's ability to regulate it."</p>

3. “A World Class Environmental Monitoring, Evaluation and Reporting System for Alberta: The Report of the Alberta Environmental Monitoring Panel” (June 2011)	
<p>“Alberta should create oilsands commission: panel” (6 July 2011), online: CTVNews.ca https://www.ctvnews.ca/alberta-should-create-oilsands-commission-panel-1.666396.</p>	<p>“Alberta Environment Minister Rob Renner formed the panel in January, after studies found serious flaws in the current monitoring system.”</p>
<p>“Alberta, Canada launch joint oilsands monitoring system” (3 February 2012), online: CBC.ca https://www.cbc.ca/news/canada/edmonton/alberta-canada-launch-joint-oilsands-monitoring-system-1.1150338.</p>	<p>“A former top energy executive and a respected academic will lead a government-appointed panel to design a credible way to monitor the environmental impact of Alberta's oilsands.”</p> <p>“David Schindler, the University of Alberta water scientist whose research helped spur the panel's creation, expressed similar concerns.”</p> <p>“I wonder why all of these business types are needed,” he said. “I can't see that they know anything about monitoring.”</p>
<p>“Water expert quits Alberta oilsands monitoring panel” (2 February 2011), online: CTVNews.ca https://www.ctvnews.ca/water-expert-quits-alberta-oilsands-monitoring-panel-1.603063.</p>	<p>“I am withdrawing from the provincial environmental monitoring panel at this time due to an accumulation of concerns that have made me increasingly uncomfortable,” Ingram writes.</p> <p>“I am disappointed that there are so few scientists ... on the panel,” said Ingram who has served on other panels and water policy workshops.”</p>
<p>Henton, Darcy, “Environment ministers to unveil oilsands monitoring strategy; Long-awaited response by Alberta, Ottawa to scientific panel concerns” (3 February 2012), online: <i>The Globe and Mail</i>, https://ezproxy.lib.ucalgary.ca/login?url=https://www-proquest-com.ezproxy.lib.ucalgary.ca/newspaper/s/environment-ministers-unveil-oilsands-monitoring/docview/919885496/se-2?accountid=9838.</p>	<p>“Oilsands monitoring has been a controversial issue in the province since 2008, with government officials denying claims of health and environmental impacts and rejecting scientific reports that slammed the existing industry-funded monitoring system.</p> <p>“University of Alberta water scientist David Schindler and colleagues published a study in August 2010 saying the oilsands industry increases the amount of pollutants in the Athabasca River, contrary to claims made by industry and government. His and other studies prompted the creation of both federal and</p>

	provincial panels aimed at improving environmental monitoring in the oilsands.”
Thomson, Graham, “David shames Goliath into oilsands action; U of A scientist Schindler presented evidence of northern pollution that couldn't be ignored” (4 February 2012), online: <i>Edmonton Journal</i> https://ezproxy.lib.ucalgary.ca/login?url=https://www-proquest-com.ezproxy.lib.ucalgary.ca/newspaper/s/david-shames-goliath-into-oilsands-action-u/docview/920030858/se-2?accountid=9838 .	<p>“Alberta's monitoring system to this point has been spotty, disorganized and often incredible.</p> <p>“For years, the Alberta government claimed the oilsands industry, the largest energy project on Earth, was having absolutely no effect on the environment.”</p> <p>“The government stuck tenaciously to its argument that all the contaminants in the air and water were the result of the Athabasca River cutting a path through the oilsands, releasing naturally occurring bitumen into the water.</p> <p>“Then came a seminal moment in the politics of the oilsands: a research paper in August 2010 from David Schindler, a world-renowned aquatics expert at the University of Alberta, offering compelling evidence that industry was polluting the environment of northern Alberta with a periodic table of 13 pollutants including arsenic, lead and mercury.”</p>
4. Report of the Auditor General of Alberta (July 2015), Environment and Parks and the Alberta Energy Regulatory – Systems to Ensure Sufficient Financial Security for Land Disturbances from Mining	
Bishop, Grant, and Benjamin Dachis, “Regulations alone won't fix Alberta's potential oil-and-gas well crisis” (5 February 2020), online: <i>The Globe and Mail</i> , https://www.theglobeandmail.com/opinion/article-regulations-alone-wont-fix-albertas-potential-oil-and-gas-well/ .	“Old or spent oil and gas wells have accrued across Alberta in the thousands. The environmental risk in the province is high and rising, and the financial liabilities are, too: Analysis by the C.D. Howe Institute in 2017 showed that the public cost could be in the billions of dollars if companies designated as “financially fragile” by the Alberta Energy Regulator (AER) simply abandoned their wells for taxpayers to clean up – an extreme scenario that is not beyond contemplation.”
Cryderman, Kelly, “Estimated cleanup costs for Alberta's mines jumps to \$23.2-billion” (5 May 2017), online: <i>The Globe and Mail</i> , https://www.theglobeandmail.com/report-on-business/industry-news/energy-	“But Alberta Auditor General Merwan Saher has warned of a long-term risk to taxpayers, saying in a 2015 report that if the program does not ensure that enough financial security is provided by mine operators, “the province is at

and-resources/estimated-cleanup-costs-for-albertas-mines-jumps-to-232-billion/article34912511/ .	<p>risk of having to pay substantial amounts of public money" for the eventual cleanup.</p> <p>"Improvements are needed to both how security is calculated and how security amounts are monitored," he wrote."</p>
5. CEC Factual Record re: Alberta Tailings Ponds	
<p>David Thurnton, "Environmental watchdog report says Alberta oilsands tailings ponds are tainting groundwater" (3 September 2020): https://www.cbc.ca/news/politics/oilsands-tailings-groundwater-contamination-1.5711471 </p>	<p>"Based on the scientific tools used today, the current literature shows that there is strong scientifically valid evidence of oilsands processed water seepage into near-field groundwater around tailings ponds when compared with the first peer-reviewed evidence published in 2009," says the report."</p>
6. Auditor General MFSP Follow-up Report 2021	
<p>Weber, Bob, "Auditor scolds Alberta over mine cleanup fund, how province handles polluted sites" (10 June 2021), online: <i>CBC.ca</i> < https://www.cbc.ca/news/canada/edmonton/auditor-scolds-alberta-over-mine-cleanup-fund-how-province-handles-polluted-sites-1.6061474>. </p>	<p>"Alberta's auditor general is criticizing the government for failing to fix problems pointed out six years ago in a program that's supposed to guarantee coal and oilsands mining companies clean up after themselves."</p> <p>"Doug Wylie says there's so much confusion over who's responsible for the government's own contaminated sites that there's no stable funding to ensure that an abandoned coal mine in northern Alberta stays safe."</p>
General/Other Media Reports	
<p>Jeff Lewis and Jeff Jones, "Hustle in the oil patch: Inside a looming financial and environmental crisis" (23 November 2018) (<i>Globe and Mail</i>): https://www.theglobeandmail.com/canada/article-hustle-in-the-oil-patch-inside-a-looming-financial-and-environmental/ </p>	<p>"In the oil patch, pliant regulators have enabled well-known companies, including Husky Energy Inc., Enerplus Corp. and others, to foist cleanup costs onto small companies that are buying up the distressed wells of those bigger players. In some cases, those smaller players are purchasing the assets even though they are unable to secure financing from major banks.</p> <p>"The risky bet is that natural-gas prices will rebound and deliver payoffs big enough to generate profits while also funding the cleanup of old wells as they peter out.</p> <p>"But the gamble has stirred a backlash in the industry. It has also angered landowners who complain of being shortchanged on lease payments from energy companies. And</p>

	ultimately it has left taxpayers to shoulder a financial and environmental mess. In Alberta, a string of corporate bankruptcies has already pushed the number of defunct well sites to 4,349, up from 545 in 2014, necessitating a \$235-million loan from the provincial government last year to shore up the fund set aside by industry to pay for cleanup.”
Emma McIntosh, David Bruser, Mike De Souza and Carolyn Jarvis, “What would it cost to clean up Alberta’s oilpatch? \$260 billion, a top official warns” (1 November 2018): https://www.thestar.com/news/investigations/2018/11/01/what-would-it-cost-to-clean-up-albertas-oilpatch-260-billion-a-top-official-warns.html	<p>“Cleaning up the Alberta oilpatch could cost an estimated \$260 billion, internal regulatory documents warn.”</p> <p>“The staggering financial liabilities for the energy industry’s mining waste and graveyard of spent facilities were spelled out by a high-ranking official of the Alberta Energy Regulator (AER) in a presentation to a private audience in Calgary in February.”</p> <p>“The estimated liabilities are far higher than any liability amount made public by government and industry officials.”</p>
Janet French, “Investigators say former Alberta Energy Regulator CEO 'grossly mismanaged' public funds” (4 October 2019): https://edmontonjournal.com/news/local-news/alberta-energy-regulator-former-ceo-grossly-mismanaged-public-funds	The former CEO of the Alberta Energy Regulator “grossly mismanaged” public funds, public assets and public services when he created a non-profit corporation to sell Alberta’s regulatory expertise to other countries, according to investigations by Alberta’s auditor general and public interest commissioner .
Charles Rusnell, “Premier Jason Kenney's campaign manager hired as VP of Alberta Energy Regulator” (15 July 2020): https://www.cbc.ca/news/canada/edmonton/premier-jason-kenney-s-campaign-manager-hired-as-vp-of-alberta-energy-regulator-1.5649972	“Premier Jason Kenney's campaign manager and an outspoken human-caused global-warming skeptic has been hired as the Alberta Energy Regulator's new vice president of its science and innovation branch.”

In light of the foregoing, the question appears to be not why Albertans do not trust their regulators, but rather how could they?

IV. CONCLUSION AND RECOMMENDATIONS

There is something deeply wrong with the state of regulation in Alberta. In addition to the independent reports cited above, this basic observation is supported by peer-reviewed literature (see e.g. Mac A. Campbell et al., “Quantifying the Impacts of Oil Sands Development on Wildlife: Perspectives from Impact Assessments” (2019) *Environmental Reviews* (observing persistent deficient EIS practice)). One example from my own research is the chronic misuse of an environmental management tool known as “adaptive management” when assessing and approving projects – including coal mines.⁵ Adaptive management is supposed to be a structured and rigorous process for reducing the uncertainty associated with some environmental problems. As applied in Alberta’s energy resource sector, however, it has been used by both proponents and regulators to punt the identification of various mitigation measures – including with respect to selenium in the coal mining context. Indeed, in the context of the proposed Grassy Mountain coal project, Benga Resources referred to adaptive management over 500 times in its EIS. The results of such an approach are predictably bad.

What can be done? On the one hand, the matter of regulatory trust obviously transcends the coal policy question. As a former public servant, I am also acutely aware that accountability for many high-level decisions, such as the ultimate design of the MFSP program, lies with Alberta’s political class. As in so many other contexts, the first step is undoubtedly to recognize and acknowledge the scope and magnitude of the problem; regulatory trust cannot be rebuilt on the basis of fiction. Consequently, and relying on this and other submissions, this Committee should explicitly acknowledge what so many Albertans already know: that contrary to political talking points, our regulators are under-resourced, lack capacity, and consistently privilege political and industry preferences over the public interest.

A second step would be to recommend increased transparency in all facets of resource regulation. Sunshine is the best disinfectant, and such transparency could be expected to further reveal the fundamental problems that need to be addressed (*i.e.*, resource and capacity constraints, industry lobbying). Finally, some measure of independence is also generally regarded as a best practice. Such independence was recommended and existed, albeit imperfectly, for the brief period that was the Alberta independent monitoring agency’s life. Although this agency was beset with other problems, a measure of independence from political and industry interference was not one of them.

Best regards,

Martin Z. Olszynski

⁵ See Martin Olszynski “Assessing Adaptive Management in Alberta’s Energy Resource Sector” (2 February, 2017), online: ABlawg, https://ablawg.ca/wp-content/uploads/2017/02/Blog_MO_Adaptive_Management.pdf and Martin Olszynski, “Failed Experiments: An Empirical Assessment of Adaptive Management in Alberta’s Energy Resources Sector” (2017) 50:3 UBC L Rev 657, online: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2909040